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THE EFFECT OF ECONOMIC REFORMS ON ECONOMIC GROWTH: EVIDENCE FROM NIGERIA

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ABSTRACT

The study examined the effect of ease of doing business on economic growth in Nigeria for the period 2006-2016. The study employed economic reforms proxy by ease of doing business dimensions as independent variables, while Gross Domestic Product (GDP) at current prices is applied as the dependent variable. Multiple regression and correlation analysis were used for data analysis. The study found that individually Getting Credit, Protecting Investors, Trading Across Borders, and Registering Property positively, but insignificantly affects GDP, while starting a business negatively but insignificantly affects GDP. However, the measures of ease of doing business cumulatively significantly affect economic growth. Thus, the study failed to accept the null hypothesis that ease of doing business does not significantly affect economic growth. The study, therefore, concludes that ease of doing business significantly affects economic growth in Nigeria. The study recommends that policy makers should not just continue to ease requirement that promote businesses, but also takes into consideration economic variables such as interest rate, exchange rate, inflation, etc. that are not incorporated in the ease of doing business index in order to provide an enabling environment for businesses to flourish.

Keywords: Ease of Doing Business, Gross Domestic Product, Economic Reforms

I. INTRODUCTION

Nigeria has continued to evolve structural, economic and financial reforms. These reforms are aimed at improving the economic functioning of markets and diversifying the economy, which are expected to culminate into inflows of investments and economic growths. A pivotal instrument of these reforms is economic regulations, the absence of these reforms though may be perceived as insignificant, there is a growing consensus that the quality of business regulation and the institutions that enforce it are a major determinant of prosperity and malfunctioning of economic regulations can hinder economic

growth (Heyman, Norbäck & Persson, 2015; Haidar 2012). However, regulations have also been found to be capable of constituting a clog to economic progress, where they are not well thought out or when wrongly applied. In these cases, they strangulate rather than support the growth of the economy.

The World Bank developed measures to determine annually how regulatory reforms for ease of doing business have enhanced or constrict business activity. The Doing Business project, launched in 2002, examines local small and medium-size firms and measures the regulations applying to them through their life cycle (Doing Business Report, 2018). Ease of Doing Business framework encapsulates varying important dimensions of regulatory environment of local firms. Presently the ease of doing business framework rank economies based on quantitative indicators on regulation for starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency (Doing Business Report, 2018). Doing Business also measures features of labour market regulation. Although Doing Business does not present rankings of economies on the labour market regulation indicators or include the topic in the aggregate distance to frontier score or ranking on the ease of doing business, it does present the data for these indicators.The Doing Business report contains data in four aggregate forms, the economies distance to frontier score, indicators distance to frontier score, economies and indicators ease of doing business ranking.

In 2016, the Nigeria economy fell into recession after three consecutive quarters of GDP decline. To put the economy back on track of economic recovery, Nigeria government evolved wide-ranging economic reforms especially regulations aimed at ease of doing business and attractive to investors, which is expected to boost economic activities. Study conducted by the World Bank has shown that domestic structural impediments have contributed significantly to the recent slowdown in productivity growth in many EMEs (Didier et al. 2015).Thus, it has been opined that the slowdown in growth combined with unfavourable socio-political uncertainty, will continue to weigh on growth (Hintošová, Kubíková and Ručinsk, 2016).

Despite the conflicting empirical evidences on the efficacy regulatory reforms on economic activity, governments have continued evolve these reforms for ease of doing business. The divergence in conclusion drawn may be attributed to period of the study, dimensions of ease of doing business employed and methodology applied for analysis. This study differs from previous literature

while other studies use cross-country data with varying characteristics, this study focus on a single emerging economy with high prospects and potentials to explore. The study uses the World Bank Doing Business indicators ranking as proxies of business regulations. This study seeks to adjust the periodic context and dimensions to determine the how economic growth will correspondingly adjust to variations made. Therefore, the study seeks to determine to what extent does ease of doing business affects economic growth in Nigeria? Furthermore, the study seeks to determine the effect of ease of doing business on economic growth in Nigeria. This is aimed at testing the following null hypothesis which is stated, thus:

H_{01}: Ease of Doing Business does not significantly affect Economic Growth in Nigeria

The study is expected to broaden the horizon of the body of literature on the subject matter of the study, thus serving as a reference point for further research. It is also expected to serve as input on how economic policy makers should evolve economic reform measure to catalyse economic growth and prosperity. The study is confined to the period 2006-2016, using data drawn only from ease of doing business reports by World Bank.

II. LITERATURE REVIEW

Studies have been conducted on the connection between ease of doing business and economic growth in varying economies and periods. These studies encompass those conducted in both developed and emerging markets with varying business environments. Thus, literature on ease of doing business and some economic indicators are reviewed.

A study conducted by Adepoju (2017) examined the impact of ease doing business on the growth rate of GDP per capita. The Worldwide Governance Indicators incorporated in the study to control for other economic factors related to the business climate and economic growth. The result shows that ease of doing business has an overall statistically significant effect on the annual growth rate of GDP per capita. However, the estimated coefficients of the Doing Business indicators for the full sample are statistically insignificant with no effect on the annual growth rate of GDP per capita, while the indicators for the subsamples have a statistically significant effect. Furthermore, the result of subsamples based on country income groups' classifications showed conflicting results. Thus, the study concluded that ease of doing business plays a significant role in economic growth, but that the effect varies across groups of countries.

In addition, Pere and Hashorva (2015) investigates the regulation and administrative facilitation aspects of doing business in Western Balkans Countries, to determine whether it led to the development of private business and economic growth. The results of statistical analysis of the effect of administrative facilities and the rules for doing business on economic growth in the Western Balkan countries suggest that there is positive and statistically significant correlation between these variables. In addition, it was observed that economic growth is strongly influenced by from credit's facilitation, while the impact of other factors such as power supply, the ease of registering property, fiscal procedures, the implementation and the possibility of settlement of contracts etc. positively but did not significantly affects economic growth. The results also show that this effect is not delayed, but manifest immediate within a year.

Furthermore, Ani (2015) examined the effect of ease of doing business on economic growth of some economies in Asia. Ease of doing business is represented by ten Doing Business indicators (DBI), while Gross Domestic Product (GDP) was used as the proxy variable for economic growth. Data were analyzed using multiple regressions. The result of the study indicates that Singapore has the best regulatory performance in Starting Business, Registering Property, Protecting Investors, Trading across Borders, and Enforcing Contracts. In addition, China showed the highest economic growth. The study found out that the variations in ease of doing business was explained by dealing with construction permits, getting credit, registering property and trading across borders. Dealing with construction permits and getting credit have negative effect to Gross Domestic Product while registering property and trading across borders have positive effect. Trading across borders greatly affect gross domestic product among selected countries in Asia.

Also, Karama (2014) investigates the impact of corruption and rule of law on ease of doing business, GDP growth and GDP per capita using the countries from the Bribe Payers Index. The result of analysis shows negative effect of corruption, bribery and rule of law have on the ease of doing business in a country at macro level. It also shows that there is positive significant effect of corruption, bribery, and rule of law have on a country's economy on the micro level. Thus, it could be inferring that corruption, bribery, and rule of law indices weigh heavily and have a higher magnitude effect on ease of doing business and GDP per capita than on GDP growth.

Furthermore, Saleh (2013) analyzed Egypt performance on the doing business on investment and economic growth for the period 2004 to 2010. The

study found that rules affecting the scope, accessibility and quality of credit information available through either public or private credit registries are positively correlated to GDP increase. The amount of taxes and mandatory contributions payable by the business in the second year of operation, expressed as a share of commercial profits were found to correlate negatively. In addition, bureaucratic measure of the effect of an increase or decrease in the average number of documents required to export goods was found to negatively correlate to economic growth. Finally, the study also found a positive correlation between increases in the average days it takes to complete a procedure to get a permit will increase the growth in GDP.

Another widely cited literature is Haidar (2012) who examined the impact of business regulatory reforms on economic growth rates, using cross-country differences in business regulatory reforms data from the World Bank Doing Business project and variables of macroeconomic dynamics. The study found that there is statistically significant evidence, across 172 countries, of economic growth response to business regulatory reforms. Also, there is fairly robust evidence of positive impacts of regulatory reforms and these estimated impacts is sizeable and plausibly large. However, the extent to which economic growth has decreased differed among countries that reformed at least one area during the 3 years that preceded the recent financial crisis to those that did not. Thus, the study concluded that the reforms, which improved business and investment climate, might have helped to mitigate the effects of the 2008 global slump in economic growth. Furthermore, countries with more business regulatory reforms enjoyed higher economic growth rates.

Furthermore, Mongay and Filipescu (2012) conducted a correlation analysis of 172 countries data to establish the relationship between corruption and ease of doing business variables using a bivariate correlation analysis. The 172 countries were analyzed by comparing their positions in the Corruption Perception Index (CPI) ranking and the ease of doing business ranking. The study concludes that there is a high degree of interdependency between the two variables analyzed. Thus, conclude that corrupt nations are inclined to make business more difficult and complex for local or foreign investors and vice versa.

Eifert (2009) assessed the impact of regulatory reform on investment and GDP growth using an Arellano-Bond dynamic panel estimator to control for unobserved cross-country heterogeneity and the correlation between reform timing and the business cycle over the period 2003 to 2007. The study shows a positive impact of regulatory reforms in countries with relatively poor condition

of governance and relatively well-governed condition on income. In addition, the results show a significant increase in investment in both subgroups of the country's investment in the subsequent year.

One of the pioneer studies in the area of ease of point business report is Djankov, McLiesh and Ramalho (2006) examine the link between regulations governing business activity and the economic growth of countries. The study uses the 2004 Doing Business single cross-section data created by the World Bank to measure the business regulations for 135 countries, and the average annual growth rate of GDP per capita between 1993 and 2002 as their dependent variable. They establish that the relationship between better regulations and higher growth rates is consistently significant. In addition, the results indicate that the effects of improvements in primary school enrollment, secondary education, government consumption, and inflation are significantly lower than the impact of business regulations on the economic growth rate.

Another area that has been extensively explored is the effect of Ease of doing business and Foreign Direct Investments. Mahuni and Bonga (2017) analysed the impact of Ease of Doing Business Indicators on FDI inflows in Zimbabwe. A trend analysis for ease of doing business indicators was done to check on how the regulatory environment has been changing using 2004-2016 data. Four indicators were found to significantly affect FDI flows. The study found that Enforcing Contracts, Paying Taxes, Getting Electricity and Dealing with Construction Permits are significant indices to explain FDI flows in the country.

Hintošová, Kubíková and Ručinský (2016) investigate the effect of selected business environment indicators on FDI inflows in case of Visegrad countries for the period of 2005–2015. Based on the results derived, it could be concluded that the business environment significantly affects FDI inflows. That better global competitiveness of a country leads to higher volume of inward FDI the country receives. Furthermore, economically more free country, which is more globalised, with better rating, does not attract more FDI inflows, but rather the opposite. Also, corruption of country discourages foreign investors from investing in Visegrad countries.

Vogiatzoglou (2016) examines the effect of various business regulations on foreign direct investment (FDI) attraction across ASEAN member countries. The determinants of intra-ASEAN and extra-ASEAN FDI inflows were empirically examined using a dataset of eight ASEAN countries over the period of 2003 to 2013. The results reveal that an efficient business regulatory environment is a significant determinant of FDI, and is a particularly important determinant of the inward flow of FDI.

Corcoran and Gillanders (2015) examine the effect that a country's business regulatory environment has on the amount of foreign direct investment it attracts. We use the World Bank's Ease of Doing Business ranking to capture the costs that firms face when operating in a country. Several interesting results emerge. Firstly, the Doing Business rank is highly significant when included in a standard empirical FDI model estimated on data averaged over the period 2004-2009. Secondly, the significance of the overall Doing Business is driven by the Ease of Trading across Borders component. We argue that this is a more intuitively appealing proxy for trade costs than the frequently used openness variable. The relationship does not seem to exist for the World's poorest region, Sub-Saharan Africa, or for the OECD. Finally, we find no evidence that the ease of doing business of nearby countries has an effect on the FDI that a country gets in general. However, in terms of attracting FDI from the US, it helps to be near countries with good trade regulation and bad regulation in other respects.

Lastly, Shahadan, Sarmidi and Faizi (2014) explored the relationships between Doing Business indexes and FDI inflow. Random effect method of analysis was employed to identify the empirical relations and significant areas for attracting FDI net inflows. The major implication is that a better-rated business environment is more likely to attract greater amounts of FDI inflow. The result shows that the indexes have inverse relationships, except registering properties, getting credits and trade across borders. Additionally, it shows that all the indices are most likely to influence FDI inflows excluding paying taxes and resolving insolvency or closing business in the region.

III. RESEARCH METHODOLOGY

The study employed regression analysis to determine the effect of ease of doing business on economic growth. The ease of doing business ranking for each dimension was used to represent the independent variables, while economic growth proxy by GDP at current prices represents the dependent variables. Even though there are presently ten (10) ease of doing business dimensions as employed by World Bank, only eight were adapted based on availability of data for the periods of study. Multicollinearity problem was identified among some independent variables, thus adding three (3) dimensions were eliminated, and five (5) dimensions were used for the analysis.

The measures of independent variable used in the study include Starting a Business (STB), Getting Credit (GCR), Protecting Investors (PIN), Trading

across Borders (TAB), and Registering Property (RPR). Secondary data drawn from annual World Bank's ease of doing business reports and Central Bank of Nigeria website for the period 2007-2016 was analysed using multiple regression analysis. The regression model was subjected to diagnostic tests for stationarity, multicolinearity, serial correlation, heteroskedasticity and normality ensure the validity of the models. The econometric model is stated thus:

$$LOGGDPCUR = \alpha + \beta_1 LOGSTB + \beta_2 LOGGCR + \beta_3 LOGPIN + \beta_4 LOGTAB + \beta_5 LOGRPR + \beta_6 LOGCPI + \varepsilon$$

Where:

LOGGDPCUR = Gross Domestic Product at Current Prices, α = slope,

β =regression coefficient, **LOGSTB** = Starting a Business, **LOGRPR** = Registering Property, **LOGPIN** = Protecting Investors, **LOGTAB** = Trading across Borders, **LOGGCR** = Getting Credit, **LOGCPI** = Corruption Perception Index, ε = Error Term

Table I: Descriptive Statistics

	LOGGDPCUR	*LOGGTC*	*LOGPIN*	*LOGRPR*	*LOGSTB*	*LOGTAB*
Mean	7.799000	1.750000	1.720000	2.254000	2.048000	2.178000
Median	7.830000	1.905000	1.765000	2.255000	2.065000	2.165000
Maximum	8.010000	1.950000	1.850000	2.270000	2.140000	2.260000
Minimum	7.520000	1.110000	1.300000	2.230000	1.900000	2.140000
Std. Dev.	0.169211	0.287789	0.158535	0.012649	0.071305	0.036148
Skewness	-0.369043	-1.42077	-2.04337	-0.45833	-0.9024	1.107507
Kurtosis	1.799165	3.540192	6.187724	2.439815	3.011946	3.629182
Jarque-Bera	0.827823	3.485903	11.19289	0.480869	1.357262	2.209234
Probability	0.661060	0.175003	0.003711	0.786286	0.507311	0.331338
Sum	77.99000	17.50000	17.20000	22.54000	20.48000	21.78000
Sum Sq. Dev.	0.257690	0.745400	0.226200	0.001440	0.045760	0.011760
Observations	10	10	10	10	10	10

The result of descriptive statistical analysis in table 1shows a mean value of 7.799 for LOGGDPCUR and a standard deviation of 0.169, in addition LOGGTC has a mean value of 1.75 and a standard deviation of 0.287789. Furthermore, LOGPIN has a standard deviation of 0.158535 but a mean score of 1.72, LOGRPR and LOGSTB have a mean value of 2.254000, 2.048000, a standard deviation of 0.012649 and 0.071305 respectively. Lastly, LOGTAB has a mean of 2.178000 and standard deviation of 0.036148.

Source: EViews output, 2019

IV. RESULTS AND DISCUSSION

Results of descriptive statistics, diagnostic tests conducted to check for the presence of stationary, serial correlation, heteroskedasticity, normality and multicolinearity, in addition the results of correlation and multiple regression analysis are explained in this section.

Table II: Results of Diagnostic Tests

Variables	*PP t- statistics*	*Significance Level*	*Order of integration*
GDPCUR	-3.93128	5	I(0)
LOGGTC	-2.52418	10	I(1)
LOGPIN	8.314008	1	I(1)
LOGRPR	-3.15133	10	I(0)
LOGSTB	-9.93826	1	I(1)
LOGTAB	5.33726	1	I(0)
Serial Correlation	0.4285		
Heteroskedasticity	0.8456		
Normality	0.9401		
Ramsey Reset test	0.7832		

The result of the stationary test using Philip-Perron (PP) test in table II shows that the variables used in the study are stationary at levels and first difference. The result of a test for normality in the distribution shows the probability of the Jarque- Bera is 0.9401, which is greater than 0.05 at the 5% level of significance. Therefore, the data employed for analysis are normally distributed. To verify if autocorrelation exists, the study used Breush-Godfrey Serial Correlation LM Test; the p value derived is 0.4285, which is greater than 0.05 at the 5% level of significance. Thus, the null hypothesis of no autocorrelation is accepted. Additionally, the study tested the occurrence of Heteroskedasticity using Harvey Heteroskedasticity Test; the P value derived is 0.8456, which is also greater than 0.05 at the 5% level of significance. This indicates that there is no heteroskedasticity in the model. Lastly, the study tested the model specification of error, using the Ramsey-reset Test to determine whether the findings can be used for policy making. The p value of results derived from the Ramsey Reset test is 0.7832, which is greater than 0.05. This means that the error does not exist and can be used for policy making.

Source: Extracts from EViews outputs, 2019.

Table III : Correlation Matrix

VARIABLES	*LOGGTC*	*LOGPIN*	*LOGRPR*	*LOGSTB*	*LOGTAB*
LOGGTC	1				
LOGPIN	-0.275924	1			
LOGRPR	-0.634874	0.160683	1		
LOGSTB	-0.428291	-0.24966	0.551892	1	
LOGTAB	-0.447523	-0.55452	0.699854	0.731104	1

Table III presents the correlation coefficient of the variables used in the study to determine the possible collinearity problem between the independent variables. The result shows no excessive presence of multicollinearity was found in the Doing Business indicators dataset as the correlation coefficients for the five Doing Business indicators are all less than 0.8. The strongest relationship exists between LOGSTB and LOGTAB with a coefficient of 0.731104, which is below threshold of 0.8 and above for the existence of a high multicolinearity problem between independent variables as suggested by Gujarati (2003) and Rumsey (2007). Thus the result confirms that there is no multicolinearity problem between the explanatory variables.

Source: EViews output, 2019

Table IV: Estimation of Ease of Doing Business and Economic Growth Model

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
C	-9.963153	6.430643	-1.549325	0.1962
LOGGTC	0.126708	0.102031	1.241868	0.2821
LOGPIN	0.598264	0.517413	1.156260	0.3119
LOGRPR	2.176325	6.049216	0.359770	0.7372
LOGSTB	0.146699	0.378970	0.387099	0.7184
LOGTAB	5.190782	3.347119	1.550821	0.1959
R-squared	0.970595			
Adjusted R-squared	0.933840			
S.E. of regression	0.043524			
F-statistic	26.40662			
Prob (F-statistic)	0.003672			

Table IV shows the regression result for the effect of Ease of Doing Business on economic growth proxy by GDP. The result shows that individually GTC, PIN, RPR, TAB and STB positively but insignificantly affected GDP. This indicates that an increase in GTC, PIN, RPR and TAB increases GDP, which is similar to findings of Adepoju (2017) and Ani (2015). However, the measures of ease of doing business cumulatively significantly affected economic growth as the P-value of 0.003672 derived is less that the critical value of 0.05 at 5% level of significance. Therefore, the null hypothesis that ease of doing business does not significantly affect economic growth failed to be accepted. The R squared of 0.970595 indicates that 97% variation in GDP could be explained by ease of doing business measures. The Standard Error (SE) of regression at 0.04 indicates the prediction of the model is reliable.

Source: EViews output, 2019

V. CONCLUSIONS AND RECOMMENDATIONS

The study examined the effect of ease of doing business on economic growth in Nigeria.The fundamental empirical findings in this study show that cumulatively the ease of doing business indicators coefficients are statistically significant. However, the individual tests of significance for the estimated coefficients of the doing business indicators had no significant effect on GDP in Nigeria. Therefore, on the basis of the finding of the study, the measure of ease of doing business individually did not significantly affect economic growth as measured by GDP. However, ease of doing business measures employed had a cumulative significant effect on economic growth for the period of the study. Therefore, it could be inferred that the right mix of ease of doing business reforms affects economic growth in Nigeria. The conclusion drawn is in conformity with that of Pere and Hashorva (2015), Ani (2015) and Haidar (2012) that ease of doing business do significantly affect economic growth. The negative relationship between starting a business and economic growth suggests that simplifying business registration procedure may lead to proliferation of business enterprises with little impact on economic growth.Therefore, the study recommends that economic policy makers should not just continue to ease requirement that promote businesses, but evolve efficient and transparent regulations that promote businesses and at the same time take into considerations public interest.

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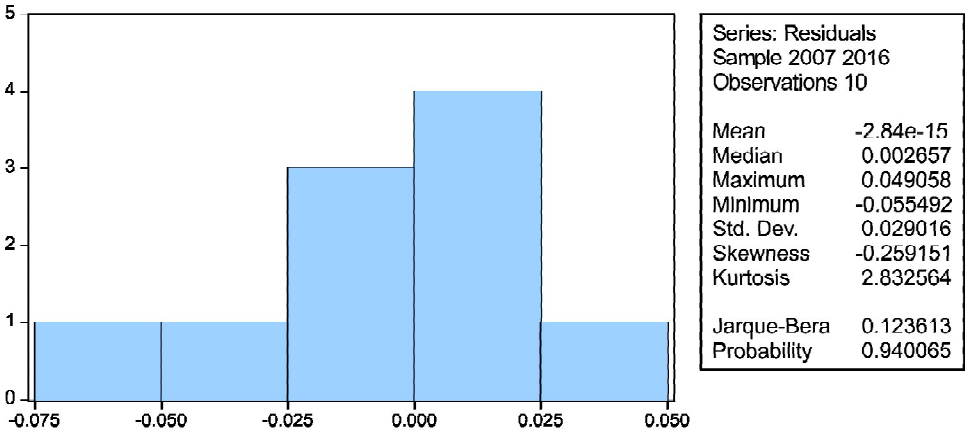
APPENDICES

Dependent Variable: GDPATCURRENT
Method: Least Squares
Sample: 2007 2016
Included observations: 10

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
C	-9.963153	6.430643	-1.549325	0.1962
LOGGTC	0.126708	0.102031	1.241868	0.2821
LOGPIN	0.598264	0.517413	1.156260	0.3119
LOGRPR	2.176325	6.049216	0.359770	0.7372
LOGSTB	0.146699	0.378970	0.387099	0.7184
LOGTAB	5.190782	3.347119	1.550821	0.1959

R-squared	0.970595	Mean dependent var	7.799000
Adjusted R-squared	0.933840	S.D. dependent var	0.169211
S.E. of regression	0.043524	Akaike info criterion	-3.147310
Sum squared resid	0.007577	Schwarz criterion	-2.965759
Log likelihood	21.73655	Hannan-Quinn criter.	-3.346471
F-statistic	26.40662	Durbin-Watson stat	2.397455
Prob(F-statistic)	0.003672		



Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.200687	Prob. F(1,3)	0.6845
Obs*R-squared	0.627012	Prob. Chi-Square(1)	0.4285

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Sample: 2007 2016
Included observations: 10
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.433293	7.253679	-0.059734	0.9561
LOGGTC	0.006297	0.114924	0.054791	0.9597
LOGPIN	0.018553	0.579904	0.031994	0.9765
LOGRPR	0.177716	6.774129	0.026234	0.9807
LOGSTB	0.015216	0.425015	0.035800	0.9737
LOGTAB	-0.019091	3.742034	-0.005102	0.9962
RESID(-1)	-0.278927	0.622631	-0.447981	0.6845

R-squared	0.062701	Mean dependent var	-2.84E-15
Adjusted R-squared	-1.811896	S.D. dependent var	0.029016
S.E. of regression	0.048656	Akaike info criterion	-3.012063
Sum squared resid	0.007102	Schwarz criterion	-2.800253
Log likelihood	22.06031	Hannan-Quinn criter.	-3.244418
F-statistic	0.033448	Durbin-Watson stat	2.173825
Prob(F-statistic)	0.999474		

Ramsey RESET Test

Equation: UNTITLED
Specification: GDPATCURRENT C LOGGTC LOGPIN LOGRPR LOGSTB LOGTAB
Omitted Variables: Squares of fitted values

	Value	*df*	*Probability*
t-statistic	0.300841	3	0.7832
F-statistic	0.090505	(1, 3)	0.7832
Likelihood ratio	0.297223	1	0.5856

F-test summary:

	Sum of Sq.	*df*	*Mean Squares*
Test SSR	0.000222	1	0.000222
Restricted SSR	0.007577	4	0.001894
Unrestricted SSR	0.007355	3	0.002452
Unrestricted SSR	0.007355	3	0.002452

LR test summary:

	Value	*df*
Restricted LogL	21.73655	4
Unrestricted LogL	21.88516	3

Unrestricted Test Equation:
Dependent Variable: GDPATCURRENT
Method: Least Squares
Sample: 2007 2016
Included observations: 10

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
C	-72.57208	208.2418	-0.348499	0.7505
LOGGTC	0.684196	1.856730	0.368495	0.7370
LOGPIN	3.242676	8.809760	0.368078	0.7373
LOGRPR	12.28888	34.31157	0.358156	0.7439
LOGSTB	0.848704	2.372974	0.357654	0.7443
LOGTAB	28.40625	77.26252	0.367659	0.7375
FITTED^2	-0.291042	0.967430	-0.300841	0.7832

R-squared	0.971456	Mean dependent var	7.799000
Adjusted R-squared	0.914369	S.D. dependent var	0.169211
S.E. of regression	0.049516	Akaike info criterion	-2.977032
Sum squared resid	0.007355	Schwarz criterion	-2.765222
Log likelihood	21.88516	Hannan-Quinn criter.	-3.209387
F-statistic	17.01712	Durbin-Watson stat	2.506914
Prob(F-statistic)	0.020383		

Heteroskedasticity Test: Harvey

F-statistic	0.203241	Prob. F(5,4)	0.9447
Obs*R-squared	2.025842	Prob. Chi-Square(5)	0.8456
Scaled explained SS	1.377300	Prob. Chi-Square(5)	0.9268

Test Equation:
Dependent Variable: LRESID2
Method: Least Squares
Sample: 2007 2016
Included observations: 10

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
C	-178.4377	382.1085	-0.466982	0.6648
LOGGTC	-0.169150	6.062651	-0.027900	0.9791
LOGPIN	-11.33657	30.74464	-0.368733	0.7310
LOGRPR	165.7542	359.4441	0.461140	0.6687
LOGSTB	-2.194575	22.51837	-0.097457	0.9271
LOGTAB	-82.29766	198.8857	-0.413794	0.7002

R-squared	0.202584	Mean dependent var	-8.361452
Adjusted R-squared	-0.794186	S.D. dependent var	1.930746
S.E. of regression	2.586180	Akaike info criterion	5.021950
Sum squared resid	26.75331	Schwarz criterion	5.203501
Log likelihood	-19.10975	Hannan-Quinn criter.	4.822789
F-statistic	0.203241	Durbin-Watson stat	3.304238
Prob(F-statistic)	0.944703		